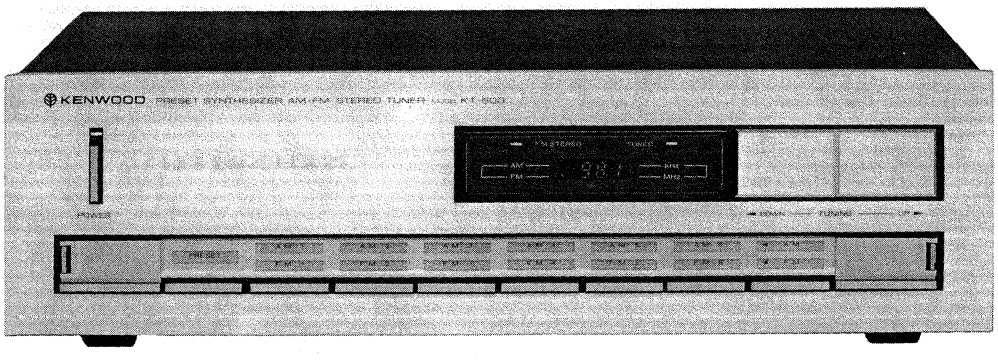
KENWOOD

HI/FI STEREO COMPONENTS

SERVICE MANUAL

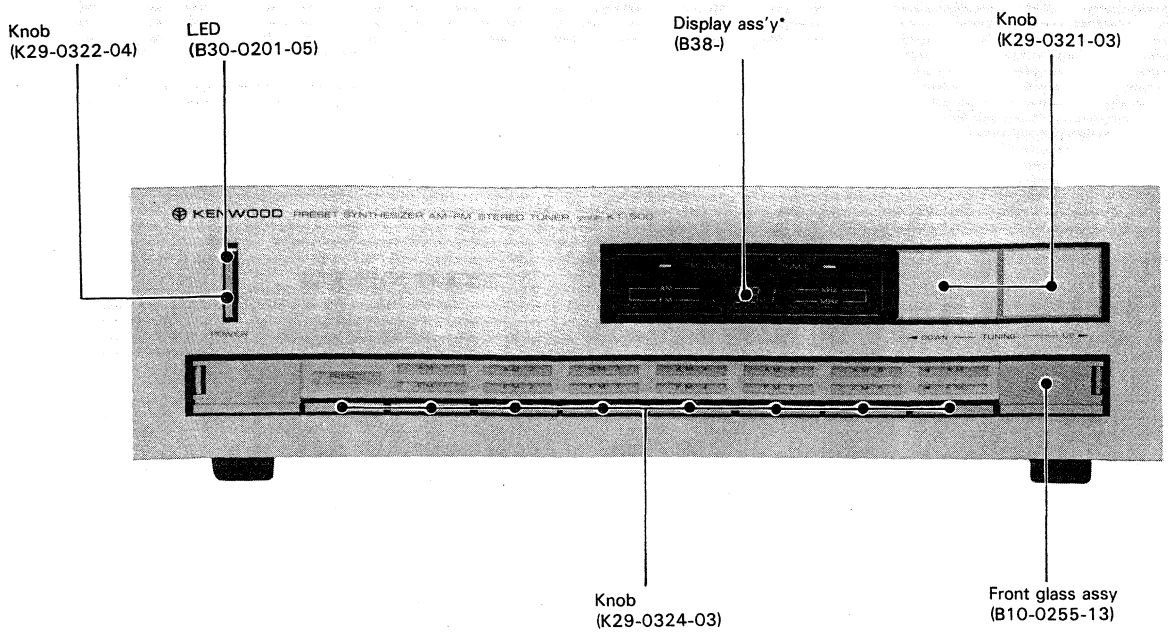
KT-500

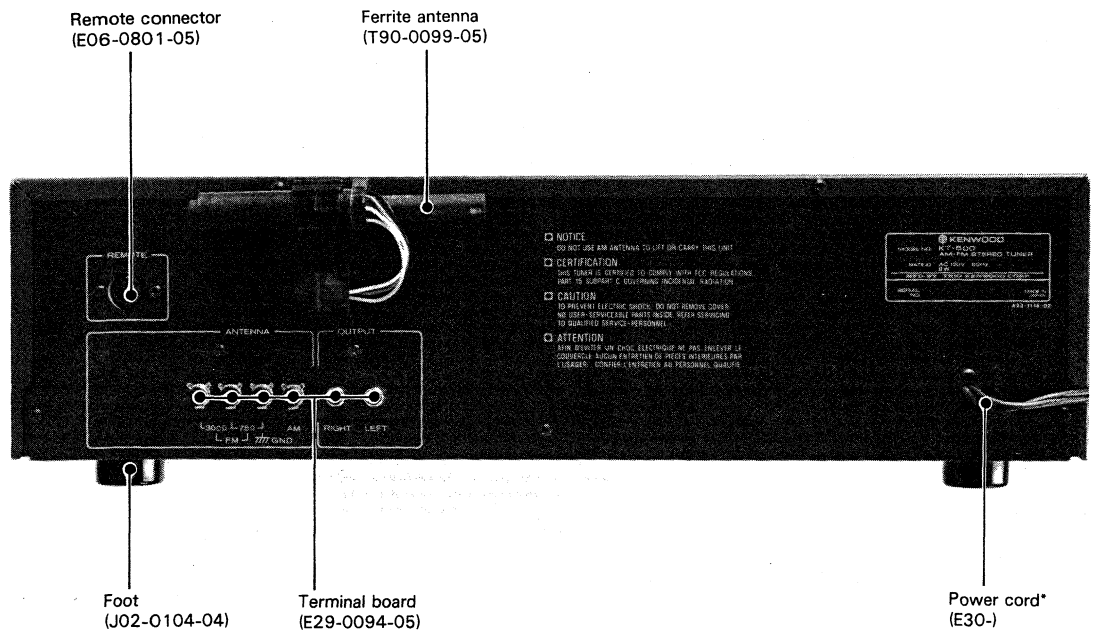
An item of adjustment is written in three languages – English, French and German.
Un article sur réglages est écrit en trois langues, Anglais, Français et Allemand.
Ein Artikel der Abgleich wird auf drei Sprachen, Englische, Französisch und Deutsch geschrieben.



PRESET SYNTHESIZER AM-FM STEREO TUNER

EXTERNAL VIEW

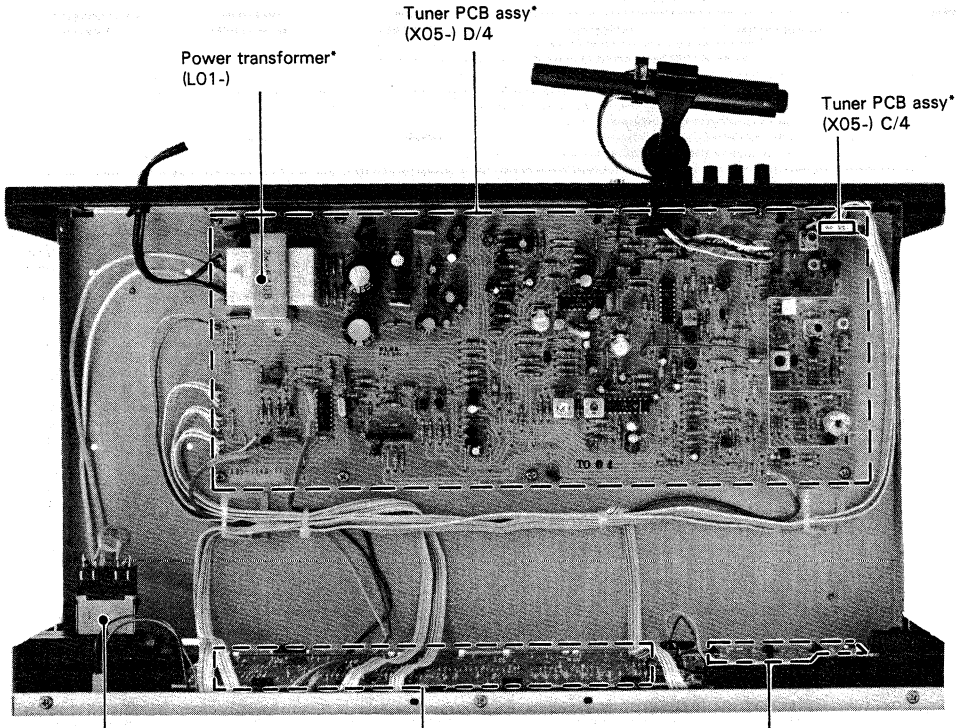




*Refer to Parts list

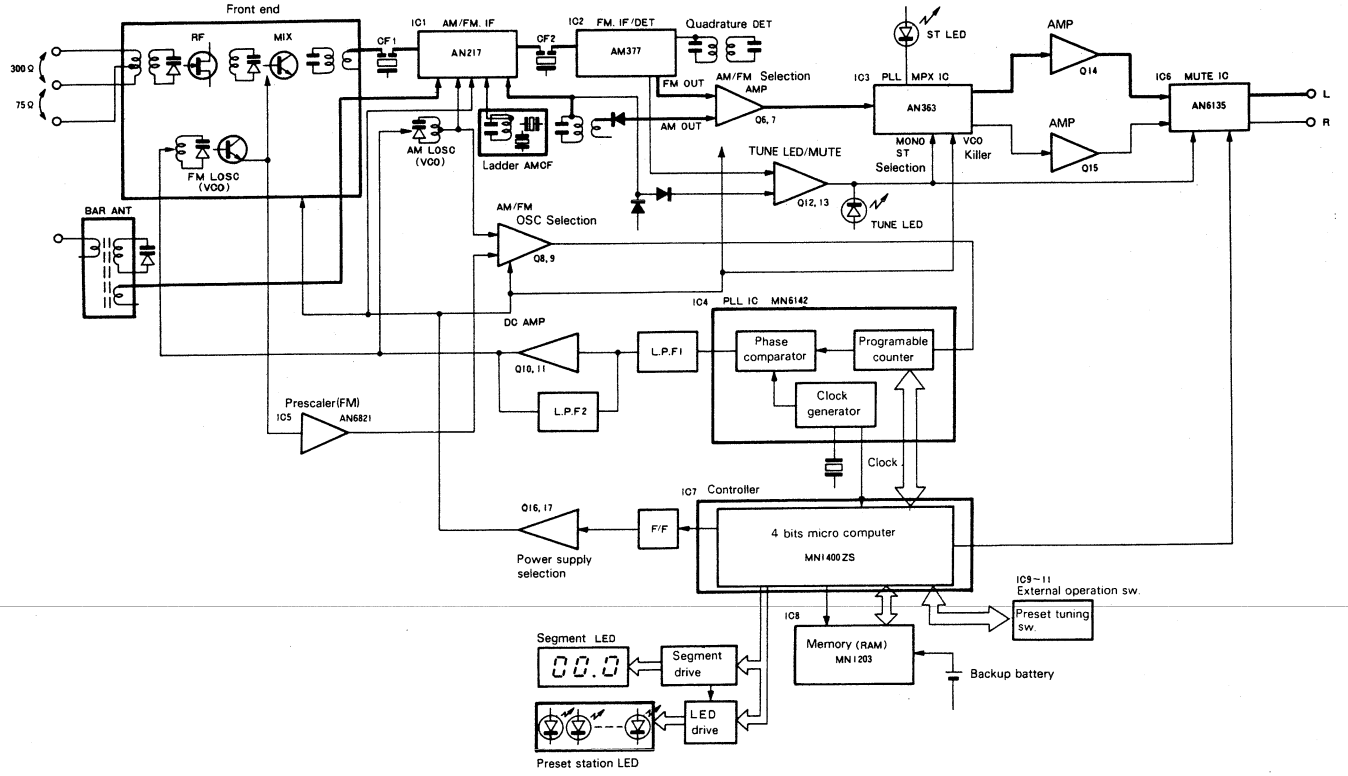
INTERNAL VIEW/BLOCK DIAGRAM

INTERNAL VIEW



*Refer to Parts list

BLOCK DIAGRAM



ADJUSTMENT

No.	ALIGNMENT	TEST EQUIPMENTS		TUNER SETTING	OUTPUT INDICATOR	ADJUSTMENT POINTS	REMARKS	
		CONNECTION	SETTING					
FM SECTION								
1a	TRACKING	Ⓐ	90MHz 1kHz (Mod) 75kHz (Dev) 40dB (INPUT)	90MHz	ⓐ	L1,2	Maximum deflection	*1
1b	TRACKING	ditto	105MHz 1kHz (Mod) 75kHz (Dev) 40dB (INPUT)	105MHz	ditto	CT1,2	ditto	*1
2a	DISCRIMINATOR	ditto	95MHz 1kHz (Mod) 75kHz (Dev) 60dB (INPUT)	95MHz	ⓑ	L8	0V	*2
2b	DISCRIMINATOR	ditto	ditto	ditto	ⓒ	L9	Minimum distortion	*2
3	VCO	ditto	95MHz 0 (Dev) 60dB (INPUT)	ditto	ⓓ	VR1	19kHz ±50Hz	*2
4	SEPARATION	Ⓑ	95MHz 1kHz (Mod) 68.25kHz (Dev, under L+R position) 60dB (INPUT) SELECTOR: L or R	ditto	ⓒ	VR2	Minimum crosstalk	*2
5	IFT	ditto	ditto	ditto	ditto	L4	Minimum distortion	*2
AM SECTION								
1a	TRACKING	Ⓒ	600kHz 400Hz 30% (Mod)	600kHz	ⓒ	AM bar antenna	Maximum deflection	*3
1b	TRACKING	ditto	1400kHz 400Hz 30% (Mod)	1400kHz	ditto	CT3	ditto	*3
2	IF	ditto	1000kHz 400Hz 30% (Mod)	1000kHz	ditto	L5,6	ditto	*3

Note 1: (*1)
Adjust the FM-SG frequency accurately to 90.00 (or 90.10) or 105.00 (105.10) MHz using a frequency counter or marker oscillator. When your local station is broadcasting with a frequency close to 90.00 or 105.00 MHz, receive this signal using a simple antenna for adjustment.

Notes 2: (*2)
1) Use 90.00 (90.10) MHz when the local station frequency is about 95.00 (95.10) MHz.
2) Use 95.00 (95.10) MHz when the local station frequency is about 90.00 (90.10) MHz.

If two local station frequencies of about 90 and 105 MHz are available, use another frequency (93.00 MHz, etc.). The frequency must be adjusted accurately with a frequency counter or marker oscillator.

Note 3: (*3)
Adjust the AM-SG frequency accurately to 600 (603), 1000 (1008) or 1400 (1404) kHz using a frequency counter or marker oscillator. If your local station is broadcasting with a frequency close to 600, 1000 or 1400 kHz, receive this signal for adjustment.

The above procedures must be observed, otherwise the tuner will not operate properly.

RÉGLAGES

Nº	ALIGNEMENT	APPAREILLAGE		RÉGLAGE DU TUNER	INDICATEUR DE SORTIE	POINTS DE RÉGLAGES	REMARQUES	
		RACCORDEMENT	RÉGLAGE					
SECTION MF								
1a	**ALIGNEMENT**	Ⓐ	90MHz 1kHz (MODULATION) 75kHz (DEVIATION) 40dB (ENTREE)	90MHz	ⓐ	L1,2	Déviation maximale	*1
1b	**ALIGNEMENT**	idem	105MHz 1kHz (MODULATION) 75kHz (DEVIATION) 40dB (ENTREE)	105MHz	idem	CT1,2	idem	*1
2a	**DISCRIMINATION**	idem	95MHz 1kHz (MODULATION) 75kHz (DEVIATION) 60dB (ENTREE)	95MHz	ⓑ	L8	0V	*2
2b	**DISCRIMINATION**	idem	95MHz 1kHz (MODULATION) 75kHz (DEVIATION) 60dB (ENTREE)	idem	ⓒ	L9	Distortion minimale	*2
3	**OSCILLATEUR 19kHz**	idem	95MHz 0 (DEVIATION) 60dB (ENTREE)	idem	ⓓ	VR1	Ajuster oscillateur à 19kHz±50Hz	*2
4	**SEPARATION**	Ⓑ	95MHz 1kHz (MODULATION) Sur la position (L+R) 68.25kHz (DEVIATION) 60dB (ENTREE) L ou R	95MHz	ⓒ	VR2	Diaphonie minimale	*2
5	**FIT**	idem	idem	idem	idem	L4	Distorsion minimale	*2
SECTION MA								
1a	**ALIGNEMENT**	Ⓒ	600kHz 400Hz 30% (MODULATION)	600kHz	ⓔ	Antenne ferrite MA	Déviation maximale	*3
1b	**ALIGNEMENT**	idem	1400kHz 400Hz 30% (MODULATION)	1400kHz	idem	CT3	idem	*3
2	**FIT**	idem	1000kHz 400Hz 30% (MODULATION)	1000kHz	idem	L5,6	idem	*3

Remarque 1. (*1)
Par le compteur de fréquence ou par l'oscillateur étalon, réglez la fréquence FM-SG sur 90,00 (ou 90,10) MHz ou 105,00 (105,10) MHz. Lorsqu'il y a une station émettrice locale ayant une de ces fréquences, vour pourrez régler en captant les émissions de cette station.

Remarque 2. (*2)
1) Utilisez 90,00 (90,10) MHz lorsqu'il y a une station émettrice locale de 95,00 (95,10) MHz.
2) Utilisez 95,00 (95,10) MHz lorsqu'il y a une station émettrice locale de 90,00 (90,10) MHz.
   Entre une station émettrice locale de 90 MHz et 105 MHz, utilisez une autre fréquence (ex. 93,00 MHz).
   Réglez la fréquence à l'aide du compteur de fréquence, de l'oscillateur étalon, etc....

Remarque 3. (*3)
Par le compteur de fréquence ou par l'oscillateur étalon, réglez la fréquence AM-SG sur 600 (603) kHz, 1000 (1008) kHz ou 1400 (1404) kHz. Lorsqu'il y a une station émettrice locale ayant une de ces fréquences, vous pourrez régler en captant les émissions de cette station.

Si vous effectuez un réglage sans tenir compte de ces indications, le tuner ne pourra pas reproduire un signal optimal.

ABGLEICHE

Nr.	Abgleich	Prüfeinrichtung		Tuner Einstellung	Ausgangsanzeige	Einstellpunkt	Bemerkungen	
		Anschlüsse	Einstellung					
UKW-Empfangsabteilung								
1a	**Empfangsbereich**	Ⓐ	90MHz 1kHz ±75kHz (Hub) 40dB (Eingangssignalpegel)	90MHz	ⓐ	L1,2	maximaler Ausschlag	*1
1b	**Empfangsbereich**	dito	105MHz 1kHz ±75kHz (Hub) 40dB (Eingangssignalpegel)	105MHz	dito	CT1,2	dito	*1
2a	**Kanalmitten-Anzei. er (TUNING METER)**	dito	95MHz 1kHz, ±75kHz (Hub)	95MHz	ⓑ	L8	0V	*2
2b	**Kanalmitten-Anzeiger (TUNING METER)**	dito	95MHz 1kHz, ±75kHz (Hub) 60dB (Eingangssignalpegel)	dito	ⓒ	L9	minimales Übersprechen	*2
3	**Spannungsgeregelter Oszillator**	dito	95MHz 0 (Hub) 60dB (Eingangssignalpegel)	dito	ⓓ	VR1	19kHz ±50Hz	*2
4	**Stereo Kanal trennung (eng)**	Ⓑ	95MHz 1kHz, ±68.25kHz (Hub) bei L+R Stellung), 60dB (Eingangssignalpegel) Wähler: L order R	95MHz	ⓒ	VR2	minimales Übersprechen	*2
5	**Zwischenfrequenz**	dito	dito	dito	dito	L4	minimales Klirr	*2
MW-Empfangsabteilung								
1a	**Empfangsbereich**	Ⓒ	600kHz 400Hz 30% Modulation	600kHz	ⓔ	MW-Ferritantenne	maximaler Ausschlag	*3
1b	**Empfangsbereich**	dito	1400kHz 400Hz, 30% Modulation	1400kHz	dito	CT3	dito	*3
2	**Zwischenfrequenz**	ditto	1000kHz 400Hz, 30% Modulation	1000kHz	ditto	L5,6	dito	*3

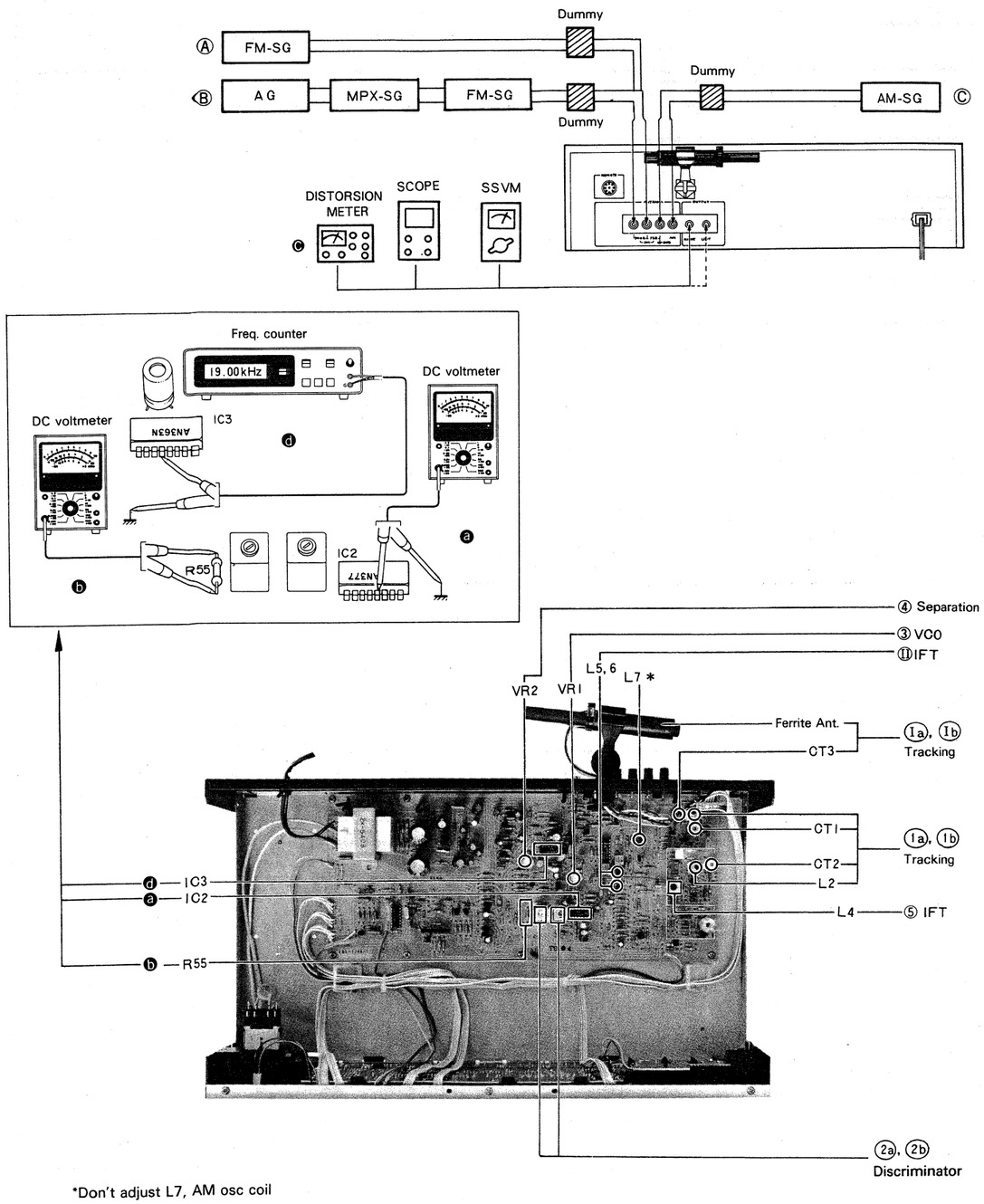
Anmerkung 1: (*1)
Die UKW-Meßsenderfrequenz mit Hilfe eines Frequenzzählers oder Frequenzmarkenoszillators genau auf 90,00 (90,10) oder 105,00 (105,10) MHz einstellen. Strahlt der Ortssender Sendungen mit einer Frequenz nahe 90,00 (90,10) oder 105,00 (105,10) MHz aus, diese mit Hilfe einer einfachen Antenne für die Einstellung empfangen.

Anmerkung 2: (*2)
1) 90,00 (90,10) MHz verwenden, wenn die Ortssenderfrequenz ungefähr 95,00 (95,10) MHz beträgt.
2) 95,00 (95,10) MHz versenden, wenn die Ortssenderfrequenz ungefähr 90,00 (90,10) MHz beträgt.

Stehen zwei Ortssenderfrequenzen von ungefähr 90 und 105 MHz zur Verfügung, eine andere Frequenz (93,0 MHz usw.) verwenden. Die Frequenz muß mit Hilfe eines Frequenzzählers oder Frequenzmarkenoszillators genau eingestellt werden.

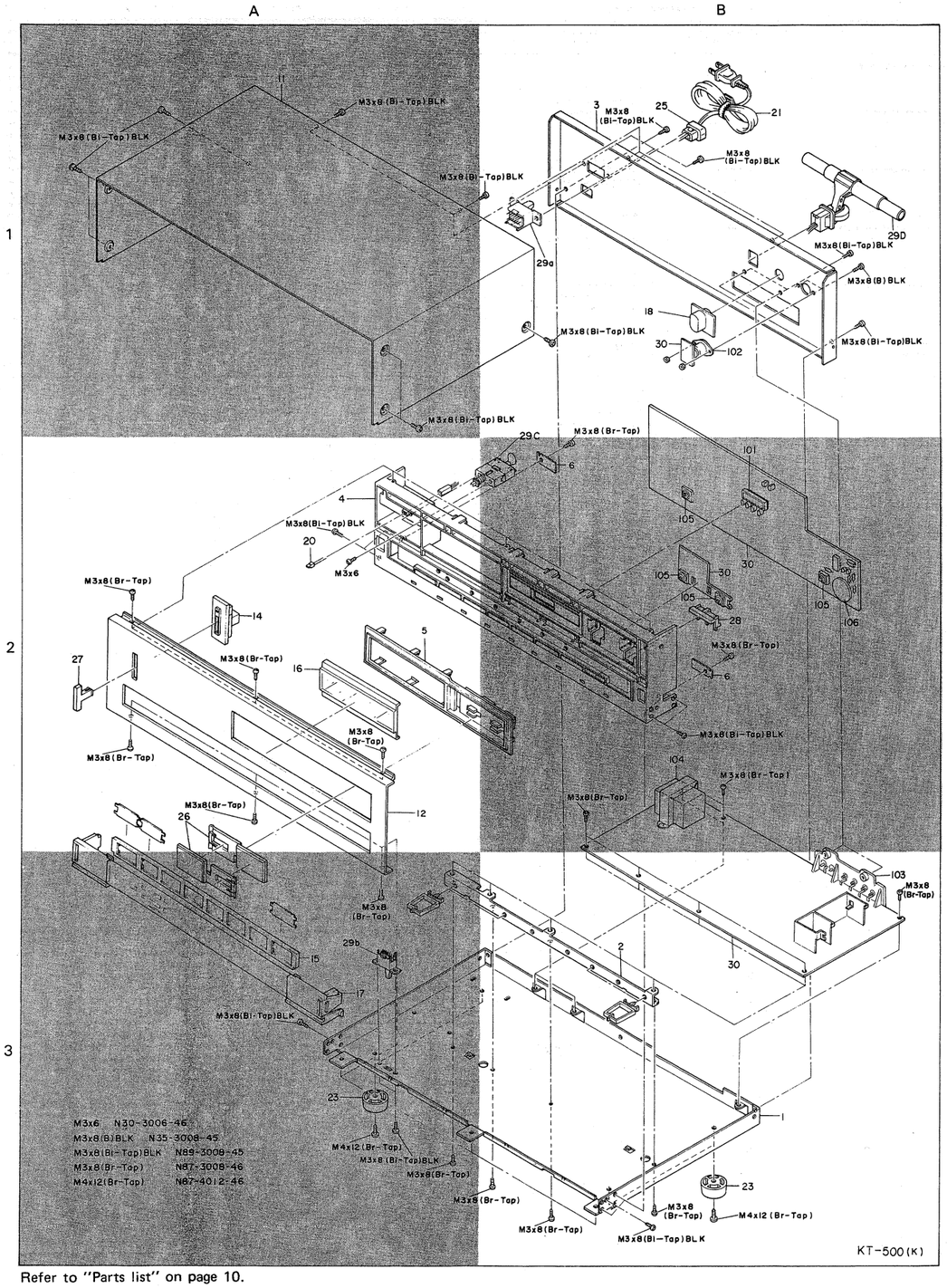
Anmerkung 3: (*3)
Die MW-Meßsenderfrequenz mit Hilfe eines Frequenzzählers oder Frequenzmarkenoszillators auf 600 (603), 1000 (1008) oder 1400 (1404) kHz einstellen. Strahlt der Ortssender Sendungen mit einer Frequenz nahe 600, 1000 oder 1400 kHz aus, diese für die Einstellung empfangen.

EXPLODED VIEW



*Don't adjust L7, AM osc coil

ADJUSTMENT



Refer to "Parts list" on page 10.

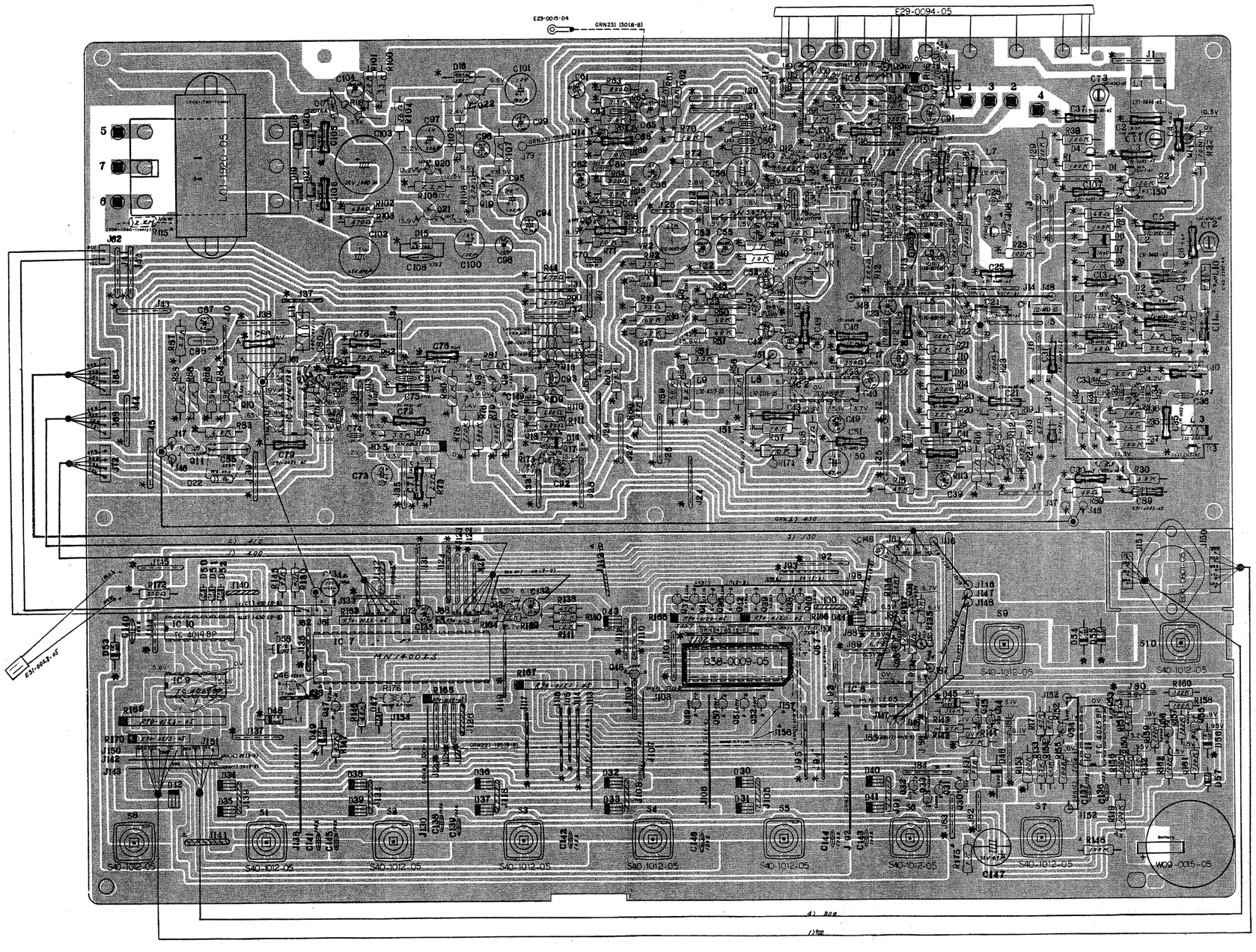
KT-500 KT-500

PC BOARD

TUNER (X05-174x-xx)

(Component side view)

This circuit board diagram is printed on semi-transparent paper so that both the component side and pattern side can be seen. Components can be seen more easily by placing a sheet of white paper behind this diagram.

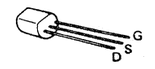


Q1 :2SK61
Q2 :2SC535(B)
Q3 :2SC1675(K) or 2SC1342(B)
Q4~13,18,46,47: 2SC2320(E,F) or 2SC945(Q,P) or 2SC828(Q,R,S)
Q14,15,53 :2SA999(E,F) or 2SA733A(Q,P) or 2SA564A(Q,R,S)
Q16 :2SA999(E,F)
Q17,19,20 :2SC2320(E,F)
Q21,22 :2SC1419(B)
Q30~33,35~42,45,55,56:2SD636(Q,R,S)
Q34,43,48~52,54,57:2SB641(Q,R,S)
Q44 :2SK681(K,L)

IC1 :AN217P(BB)
IC2 :AN377
IC3 :AN363N
IC4 :MN6142
IC5 :AN6821
IC6 :AN6135
IC7 :MN1400ZS
IC8 :MN1203
IC9 :TC4069UBP or μPD4069C
IC10 :TC4019BP
IC11 :TC4025BP or μPD4025C

D1~3 :SVC201Y-AY
D4,5 :KV1216
D6,7,10,46 :1N60
D8,9,11~14,45,47~58:1S1555 or 1S2076
D15 :XZ-142
D16 :EQA01-08(R1)
D17 :1S2076A
D18~21 :W06B
D22 :WZ-040

2SK61



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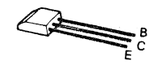

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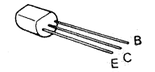
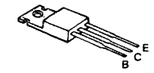
2SA733A 2SC1342
2SA999 2SC1675
2SC828 2SC2320



2SC1419



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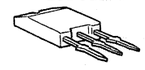
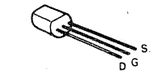
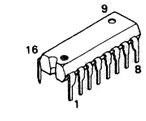
2SD636



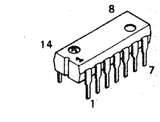
2SK68



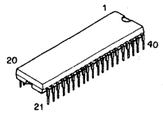
AN217P MN1203
AN363N MN6142
AN377 TC4019BP



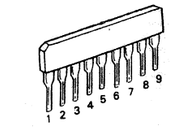
TC4025BP
TC4069UBP
μPD4025C
μPD4069C



MN1400ZS



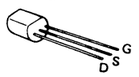
AN6821
AN6135



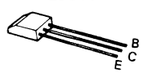
KENWOOD

PRESET SYNTHESIZER AM-FM STEREO TUNER

2SK61



2SC535



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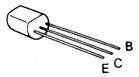
2SA733A 2SC1342
2SA999 2SC1675
2SC828 2SC2320



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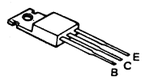

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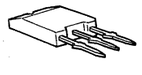
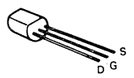
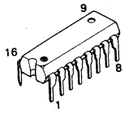
2SD636



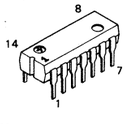
2SK68



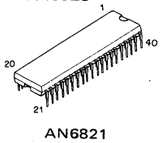
AN217P MN1203
AN363N MN6142
AN377 TC4019BP



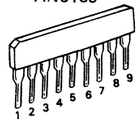
TC4025BP
TC4069UBP
μPD4025C
μPD4069C

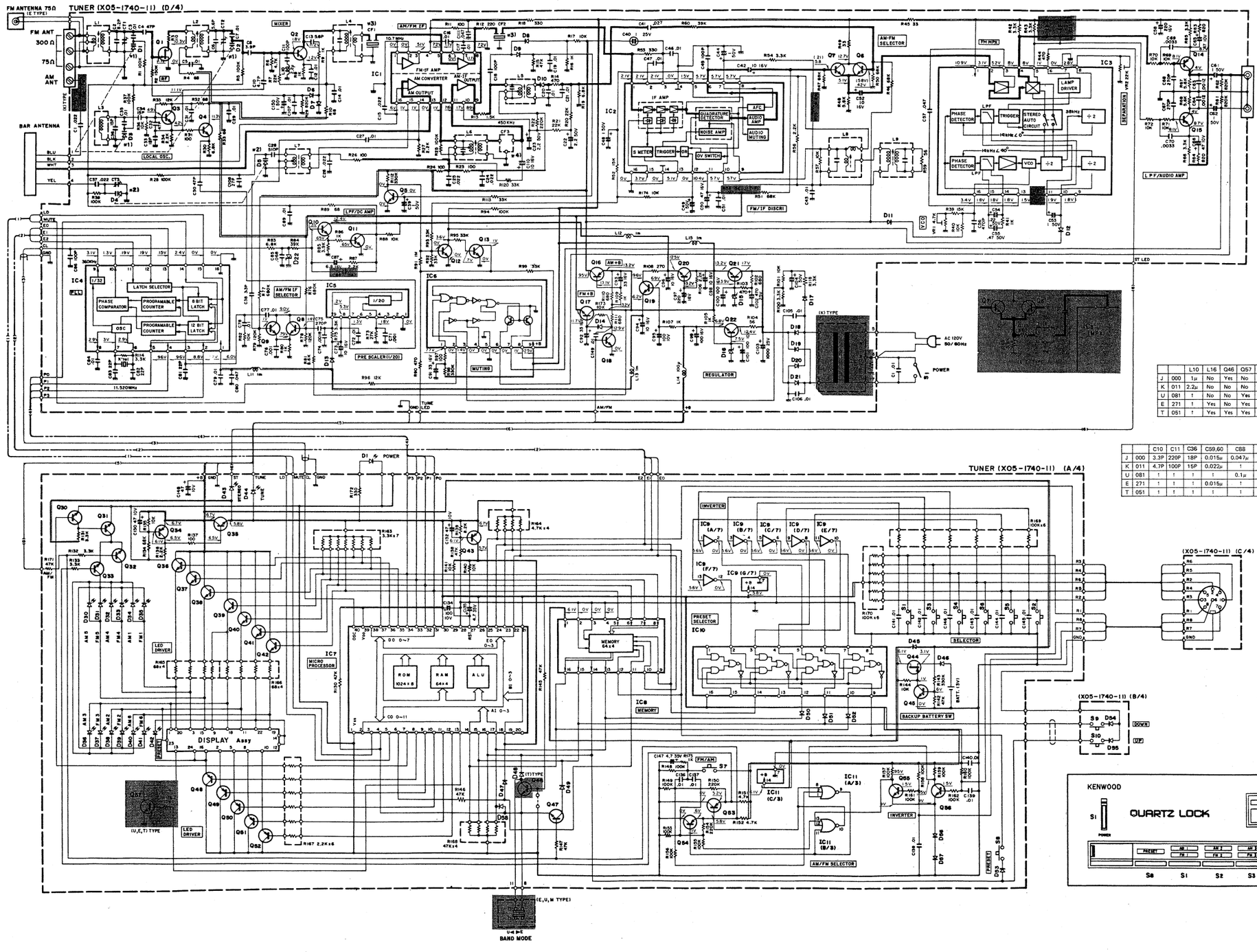


MN1400ZS



AN6821
AN6135

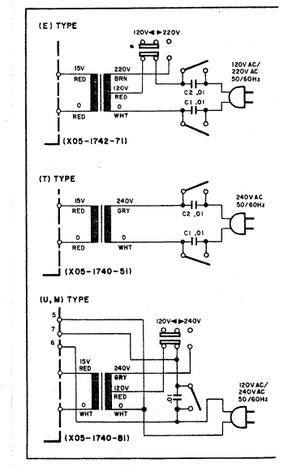


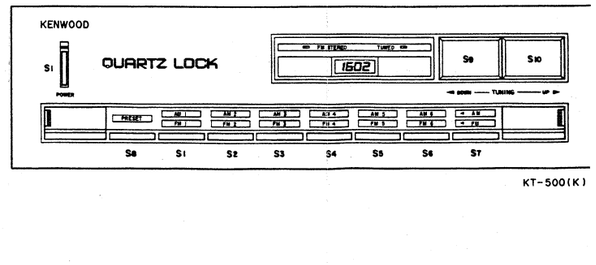


		L10	L16	Q46	Q57	D22	D58	R55	R58	R84	R85	R110	R114	R115	R116	R117	R118	R
J	000	1μ	No	Yes	No	No	No	8.2K	56	12K	1K	2.2K	3.9K	No	No	No	No	N
K	011	2.2μ	No	No	No	Yes	Yes	↑	No	39K	3.9K	3.3K	3.3K	2.2M	1.8M	No	3.3K	N
U	081	↑	No	No	Yes	Yes	Yes	↑	56	↑	↑	↑	↑	No	No	No	↑	1
E	271	↑	Yes	No	Yes	Yes	Yes	12K	No	↑	↑	↑	↑	No	No	560	↑	
T	051	↑	Yes	Yes	Yes	Yes	Yes	↑	No	↑	↑	↑	↑	No	No	↑	↑	

		C10	C11	C36	C59,60	C88	T1
J	000	3.3P	220P	1BP	0.015μ	0.047μ	Yes
K	011	4.7P	100P	1SP	0.022μ	↑	Yes
U	081	↑	↑	↑	↑	0.1μ	No
E	271	↑	↑	↑	0.015μ	↑	No
T	051	↑	↑	↑	↑	↑	No

Q1	: 2SK61
Q2	: 2SC535(B)
Q3	: 2SC1675(K) or 2S
Q4~13,18,46,47	: 2SC2320(E,F) or 2SC828(Q,R,S)
Q14,15,53	: 2SA999(E,F) or 2SA564A(Q,R,S)
Q16	: 2SA999(E,F)
Q17,19,20	: 2SC2320(E,F)
Q21,22	: 2SC1419(B)
Q30~33,35~42,45,55,56	: 2SD636(Q,R,S)
Q34,43,48~52,54,57	: 2SB641(Q,R,S)
Q44	: 2SK68(K,L)
IC1	: AN217P(BB)
IC2	: AN377
IC3	: AN363N
IC4	: MN6142
IC5	: AN6821
IC6	: AN6135
IC7	: MN1400ZS
IC8	: MN1203
IC9	: TC4069UBP or μ
IC10	: TC4019BP
IC11	: TC4025BP or μP
D1~3	: SVC201Y-AY
D4,5	: KV1216
D6,7,10,46	: IN60
D8,9,11~14,45,47~58	: 1S1555 or 1S207
D15	: XZ-142
D16	: EQA01-08(R1)
D17	: 1S2076A
D18~21	: W068
D22	: WZ-040



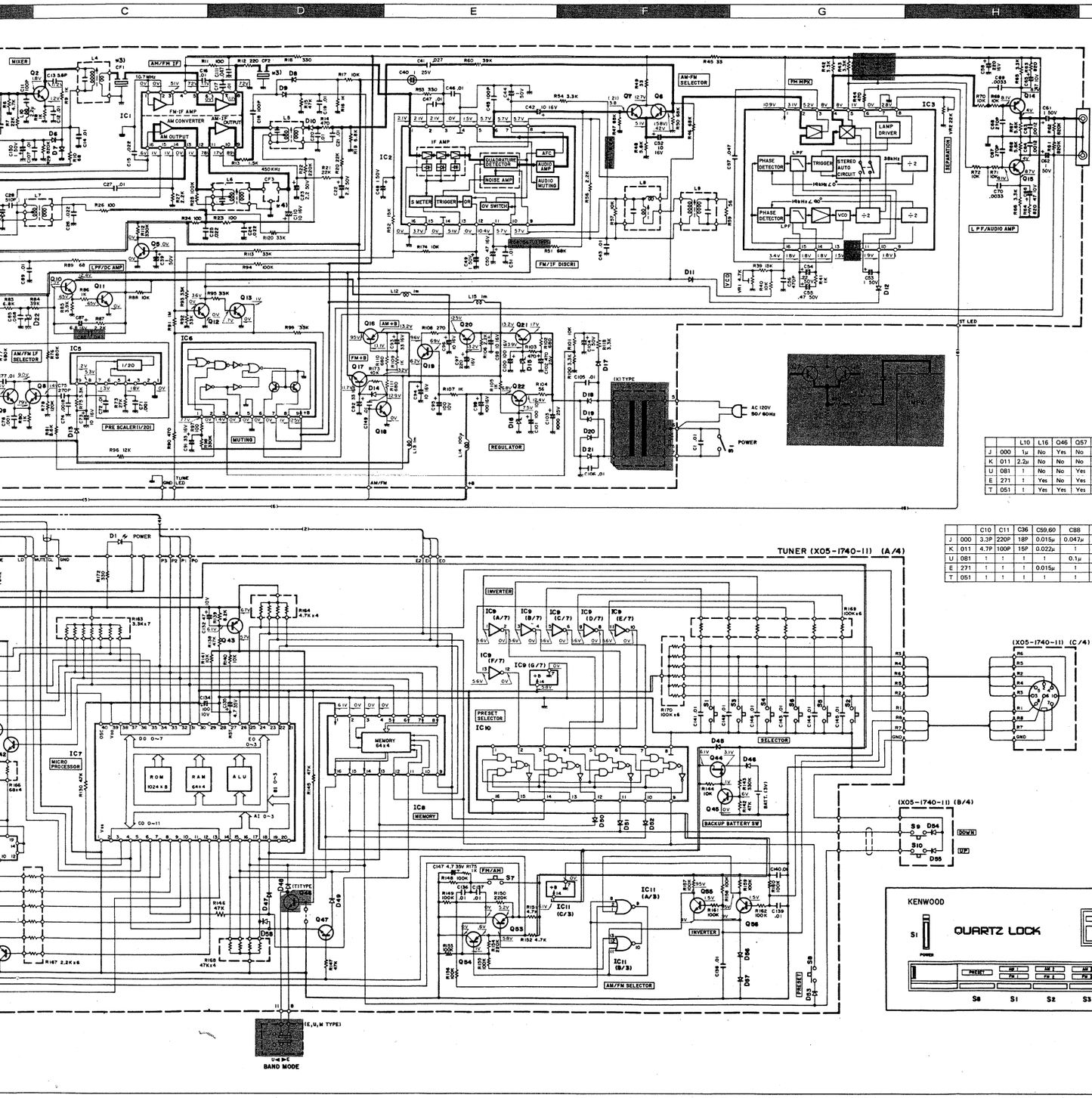


KT-500(K)

DC voltages are measured by a VOM with 20kΩ/

PRESET SYNTHESIZER AM-FM STEREO TUNER

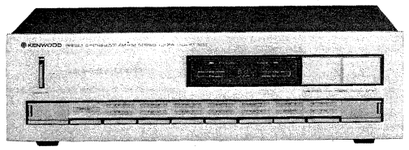
KT-500



		L10	L16	Q46	Q57	D22	D58	R55	R58	R84	R85	R110	R114	R115	R116	R117	R118	R176	C2	C6	C9
J	000	1μ	No	Yes	No	No	No	8.2K	56	12K	1K	2.2K	3.9K	No	No	No	No	No	20P	18P	8.2P
K	011	2.2μ	No	No	No	Yes	Yes	1	No	39K	3.9K	3.3K	3.3K	2.2M	1.8M	No	3.3K	No	8.2P	5.6P	No
U	081	1	No	No	Yes	Yes	Yes	1	56	1	1	1	1	No	No	No	1	10K	1	1	No
E	271	1	Yes	No	Yes	Yes	Yes	12K	No	1	1	1	1	No	No	560	1	1	1	1	No
T	051	1	Yes	Yes	Yes	Yes	Yes	1	No	1	1	1	1	No	No	1	1	1	1	1	No

		C10	C11	C36	C59,60	C88	T1
J	000	3.3P	220P	18P	0.015μ	0.047μ	Yes
K	011	4.7P	100P	15P	0.022μ	1	Yes
U	081	1	1	1	1	0.1μ	No
E	271	1	1	1	0.015μ	1	No
T	051	1	1	1	1	1	No

Q1	: 2SK61
Q2	: 2SC535(B)
Q3	: 2SC1675(K) or 2SC1342(B)
Q4~13,18,46,47	: 2SC2320(E,F) or 2SC945(Q,P) or 2SC828(Q,R,S)
Q14,15,53	: 2SA999(E,F) or 2SA733A(Q,P) or 2SA564A(Q,R,S)
Q16	: 2SA999(E,F)
Q17,19,20	: 2SC2320(E,F)
Q21,22	: 2SC1419(B)
Q30~33,35~42,45,55,56	: 2SD636(Q,R,S)
Q34,43,48~52,54,57	: 2SB641(Q,R,S)
Q44	: 2SK68(K,L)
IC1	: AN217P(BB)
IC2	: AN377
IC3	: AN363N
IC4	: MN6142
IC5	: AN6821
IC6	: AN6135
IC7	: MN1400ZS
IC8	: MN1203
IC9	: TC4069UBP or μPD4069C
IC10	: TC4019BP
IC11	: TC4025BP or μPD4025C
D1~3	: SVC201Y-AY
D4,5	: KV1216
D6,7,10,46	: IN60
D8,9,11~14,45,47~58	: 1S1555 or 1S2076
D15	: XZ-142
D16	: EQA01-08(R1)
D17	: 1S2076A
D18~21	: W068
D22	: WZ-040



SPECIFICATIONS

FM TUNER SECTION

Usable Sensitivity	10.8 dBf (1.9 μV)
50 dB Quieting Sensitivity	
Mono	17.2 dBf (4.0 μV)
Stereo	38.5 dBf (46 μV)
Signal to Noise Ratio	
Mono	70 dB
Stereo	66 dB
Total Harmonic Distortion	
Mono	0.1 % at 1,000 Hz
Stereo	0.15 % at 1,000 Hz
Frequency Response	30 Hz to 15,000 Hz, +0.2 dB, −3 dB
Capture Ratio	1.5 dB
Alternate Channel Selectivity	60 dB
Spurious Response Ratio	75 dB
Image Response Ratio	40 dB
IF Response Ratio	80 dB
AM Suppression Ratio	55 dB
Stereo Separation	50 dB at 1,000 Hz 40 dB at 50 Hz to 10,000 Hz
Antenna Impedance	300 ohms balanced and 75 ohms unbalanced
Output Level (1 kHz, 100 % Mod.)	0.67V/5.6 kiloohms

AM TUNER SECTION

Usable Sensitivity	20 μV
Signal to Noise Ratio	48 dB
Total Harmonic Distortion	0.7%
Output Level (400 Hz, 30% Mod.)	0.25V/5.6 kiloohms

SYNTHESIZED TUNING SYSTEM	FM	AM
Threshold Sensitivity	13.5 dBf (2.6 μV)	20 μV
Frequency Spacing		
USA and Canada Model	200 kHz	10 kHz
(Frequency Range)	(87.9 MHz to 107.9 MHz)	(530 kHz to 1,610 kHz)
Model destinated other than USA and Canada	50 kHz	9 kHz
(Frequency Range)	(87.5 MHz to 108.0 MHz)	(531 kHz to 1,602 kHz)
Preset Tuning	Up to 6 stations for each FM and AM	

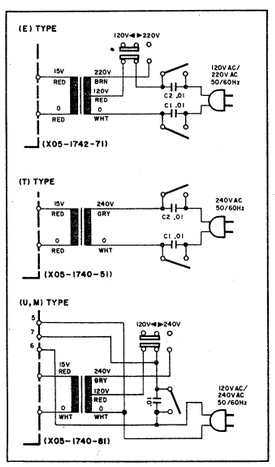
GENERAL

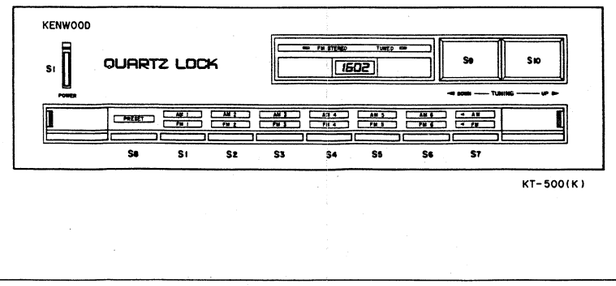
Power Requirement	60 Hz 120V (USA and Canada Model) or 50/60 Hz 110-120V/220-240V switchable
Power Consumption	8 Watts
Dimension	W : 440 mm (17-5/16") H : 133 mm (5-1/4") D : 288 mm (11-11/32")
Weight (Net)	4.3 kg (9.5 lb)

Kenwood follows a policy of continuous advancements in development. For this reason specifications may be changed without notice.

Kenwood strebt standige Verbesserungen in der Entwicklung an. Daher bleiben Anderungen der technischen Daten jederzeit vorbehalten.

Kenwood poursuit une politique de progrès constants en ce qui concerne le développement. Pour cette raison, les spécifications sont sujettes à modifications sans préavis.





KT-500(K)

DC voltages are measured by a VOM with 20kΩ/V input impedance.

*1) When any of the three vari-caps (D1-D3) in the FM front end is defective, replace all the three vari-caps at the same time.

*2) When any of the two AM vari-caps (D4, D5) is found defective, replace the two vari-caps at the same time.

*3) The FM ceramic filters (CF1, CF2) should be replaced with the specified parts. Other parts must not be used.

*4) The AM IF ceramic filter (CF3) should be replaced with the specified part. Other parts must not be used.

The above precautions must be observed, otherwise the tuner will not operate properly.

KT-500 KT-500

KT-500

PARTS LIST

Ref. No. 参照番号		Parts No. 部品番号	Description 部品名／規格	Remarks 備考
KT-500 UNIT				
1	3B	-	MAIN CHASSIS	
2	3B	-	METALLIC FRAME	
3	1B	-	REAR PANEL	
4	2A	-	PANEL ESCUTCHEON	
5	2A	-	ESCUTCHEON A	
6	2B	-	LEAF PLATE	
11	1A	A01-0365-03	METALLIC CABINET	*
12	2A	A20-1563-02	FRONT PANEL	*K
12	2A	A20-1563-02	FRONT PANEL	PU
12	2A	A20-1563-02	FRONT PANEL	ME
12	2A	A20-1564-02	FRONT PANEL	T
-		B42-0722-04	NAME PLATE (PRESET)	*
-		B42-0731-03	NAME PLATE	*
-		B46-0055-20	WARRANTY CARD	P
-		B46-0060-00	WARRANTY CARD	T
-		B46-0061-20	WARRANTY CARD	K
-		B46-0062-20	WARRANTY CARD	U
-		B46-0063-00	WARRANTY CARD	U
-		B50-3083-00	INSTRUCTION MANUAL	*K
-		B50-3083-00	INSTRUCTION MANUAL	U
-		B50-3084-00	INSTRUCTION MANUAL	PM
-		B50-3085-00	INSTRUCTION MANUAL	E
-		B50-3086-00	INSTRUCTION MANUAL	T
14	2A	B07-0291-03	ESCUTCHEON B	*
15	3A	B07-0295-02	ESCUTCHEON	*
16	2A	B10-0254-04	FRONT GLASS	*
17	3A	B10-0255-13	FRONT GLASS	*
D1	2A	B30-0201-05	LED FIG20	
C1	,2	C54-3310-39	CERAMIC 0.01UF 2KVDC	ET
C1		C91-0023-05	CERAMIC 0.01UF 250VAC	UM
C1		C91-0072-05	CERAMIC 0.01UF 125VAC	P
C1		C91-0079-05	CERAMIC 0.01UF 125VAC	PK
C1		C91-0145-05	CERAMIC 0.01UF 125VAC	K
-		E30-0505-05	AUDIO CORD	
18	1A	E04-0004-05	RECEPTACLE	E
21	1B	E30-0181-05	POWER CORD	KP
21	1B	E30-0459-05	POWER CORD	E
21	1B	E30-0545-05	POWER CORD	UM
21	1B	E30-0587-05	POWER CORD	T
-		H01-3080-04	CARTON BOX	*T
-		H01-3088-04	CARTON BOX	KU
-		H01-3088-04	CARTON BOX	M
-		H01-3089-04	CARTON BOX	P
-		H01-3090-04	CARTON BOX	E
-		H10-1543-02	POLYSTYRENE FIXTURE	*
-		H20-0417-04	COVER	M
-		H20-0452-04	COVER	KP
-		H20-0452-04	COVER	UE
-		H20-0452-04	COVER	T
23	3A,3B	J02-0104-04	FOOT	
25	1B	J41-0034-05	BUSHING	KP
25	1B	J42-0083-05	BUSHING	UM
25	1B	J42-0084-05	BUSHING	ET
26	2A	K29-0321-03	KNOB(TUNING)	
27	2A	K29-0322-04	KNOB(POWER)	
28	2B	K29-0324-03	KNOB(PRESET)	*
T1		L01-1922-05	POWER TRANS. FIG104	*T
T1		L01-1925-05	POWER TRANS. FIG104	UM
T1		L01-1927-05	POWER TRANS. FIG104	E
29A		S31-2050-05	SLIDE SWITCH	UM
29A		S31-2050-05	SLIDE SWITCH	EX
29B		S31-2057-05	SLIDE SWITCH (F SELECT)	*U
29B		S31-2057-05	SLIDE SWITCH (F SELECT)	ME
S1	29C	S40-1010-05	PUSH SWITCH (POWER)	UM
S1	29C	S40-1011-05	PUSH SWITCH (POWER)	KP
S1	29C	S40-2099-05	PUSH SWITCH (POWER)	ET
-		T90-0202-05	FM ANTENNA	
29D	1B	T90-0099-05	AM ANTENNA	*
30	2B	X05-1740-11	TUNER PCB ASSY	*K
30	2B	X05-1740-11	TUNER PCB ASSY	P
30	2B	X05-1740-51	TUNER PCB ASSY	T
30	2B	X05-1740-81	TUNER PCB ASSY	UM
30	2B	X05-1742-71	TUNER PCB ASSY	E
TUNER (X05-174x-xx)				
101	2B	B38-0009-05	DISPLAY ASSY	*K
101	2B	B38-0009-05	DISPLAY ASSY	P
101	2B	B38-0010-05	DISPLAY ASSY	UM
101	2B	B38-0010-05	DISPLAY ASSY	ET
D30	-42	B30-0198-05	LED	
D43		B30-0202-05	LED	
D44		B30-0203-05	LED	
CT1	,2	C05-0302-05	TRIMMER CAPACITOR	*
C1		C91-0085-05	CERAMIC 0.022UF M	
C2		C71-1782-96	CERAMIC 8.2PF K	
CT3		C05-0303-05	TRIMMER CAPACITOR	*
C3		C91-0083-05	CERAMIC 0.01UF M	
C4		C71-1747-05	CERAMIC 47PF J	
C5		C91-0083-05	CERAMIC 0.01UF M	
C6		C71-1756-96	CERAMIC 5.6PF K	
C7		C91-0083-05	CERAMIC 0.01UF M	
C8		C71-1739-96	CERAMIC 3.9PF K	
C10		C71-1747-96	CERAMIC 4.7PF K	
C11		C71-1710-15	CERAMIC 100PF J	
C12		C91-0083-05	CERAMIC 0.01UF M	
C13		C71-1756-96	CERAMIC 5.6PF K	
C14		C91-0083-05	CERAMIC 0.01UF M	
C15		C91-0085-05	CERAMIC 0.022UF M	
C16	,17	C91-0083-05	CERAMIC 0.01UF M	
C18		C71-1710-15	CERAMIC 100PF J	
C19	-21	C91-0083-05	CERAMIC 0.01UF M	
C22	,23	C24-1722-51	ELECTRO 2.2UF 50WV	
C24	-26	C91-0085-05	CERAMIC 0.022UF M	
C27		C91-0083-05	CERAMIC 0.01UF M	
C28		C48-1751-15	POLYSTY 510PF J	
C29		C91-0083-05	CERAMIC 0.01UF M	
C30		C71-1747-05	CERAMIC 47PF J	
C31		C91-0083-05	CERAMIC 0.01UF M	
C32		C63-1747-05	CERAMIC 47PF J	
C33		C63-1712-05	CERAMIC 12PF J	
C34		C59-1715-05	CERAMIC 15PF J	
C35		C91-0083-05	CERAMIC 0.01UF M	
C36		C64-1715-05	CERAMIC 15PF J	
C37		C91-0085-05	CERAMIC 0.022UF M	
C38		C71-1733-96	CERAMIC 3.3PF K	
C39		C24-1710-51	ELECTRO 1UF 50WV	
C40		C26-1410-57	ELECTRO 1UF 25WV	
C41		C46-1727-36	MYLAR 0.027UF K	
C42		C24-1210-61	ELECTRO 10UF 16WV	
C43		C91-0083-05	CERAMIC 0.01UF M	
C44		C24-1710-51	ELECTRO 1UF 50WV	
C45		C71-1710-15	CERAMIC 100PF J	
C46	,47	C91-0083-05	CERAMIC 0.01UF M	
C48		C24-1710-51	ELECTRO 1UF 50WV	
C49		C25-1710-57	LL-ELEC 1UF 50WV	
C50		C24-1247-61	ELECTRO 47UF 16WV	
C51	,52	C91-0083-05	CERAMIC 0.01UF M	
C52		C24-1210-61	ELECTRO 10UF 16WV	
C53		C25-1710-57	LL-ELEC 1UF 50WV	
C54		C25-1722-47	LL-ELEC 0.22UF 50WV	
C55		C25-1747-47	LL-ELEC 0.47UF 50WV	
C56		C48-1747-15	POLYSTY 470PF J	
C57		C46-1747-36	MYLAR 0.047UF K	
C58		C24-1222-71	ELECTRO 220UF 16WV	
C59	,60	C46-1715-35	MYLAR 0.015UF J	ET
C59	,60	C46-1722-35	MYLAR 0.022UF J	KP
C59	,60	C46-1722-35	MYLAR 0.022UF J	UM
C61	,62	C24-1710-51	ELECTRO 1UF 50WV	
C63	,64	C46-1712-26	MYLAR 0.0012UF K	
C65	,66	C24-1047-61	ELECTRO 47UF 10WV	
C67	,68	C52-1727-16	CERAMIC 270PF K	
C69	,70	C46-1733-26	MYLAR 0.0033UF K	
C71		C53-1710-27	CERAMIC 0.001UF M	
C72		C91-0083-05	CERAMIC 0.01UF M	
C73		C24-1210-61	ELECTRO 10UF 16WV	
C74		C52-1718-26	CERAMIC 0.0018UF K	
C75		C52-1727-16	CERAMIC 270PF K	
C76		C53-1710-27	CERAMIC 0.001UF M	
C77	-79	C91-0083-05	CERAMIC 0.01UF M	
C80		C55-1747-38	CERAMIC 0.047UF Z	
C81		C71-1722-05	CERAMIC 22PF J	
C82	,83	C63-1722-05	CERAMIC 22PF J	
C84		C91-0083-05	CERAMIC 0.01UF M	
C85		C46-1768-36	MYLAR 0.068UF K	
C86		C71-1710-15	CERAMIC 100PF J	
C87		C81-1268-57	TANTAL 6.8UF 16WV	
C88		C46-1710-46	MYLAR 0.1UF K	UM
C88		C46-1710-46	MYLAR 0.1UF K	ET
C88		C46-1747-36	MYLAR 0.047UF K	KP
C89		C91-0083-05	CERAMIC 0.01UF M	
C91	-93	C24-1233-61	ELECTRO 33UF 16WV	
C94		C24-1210-61	ELECTRO 10UF 16WV	
C95		C24-1010-71	ELECTRO 100UF 10WV	
C96		C24-1210-61	ELECTRO 10UF 16WV	
C97		C24-1222-71	ELECTRO 220UF 16WV	
C98	,99	C24-1210-61	ELECTRO 10UF 16WV	
C100		C24-1210-71	ELECTRO 100UF 16WV	
C101		C24-1010-71	ELECTRO 100UF 10WV	
C102		C24-1447-71	ELECTRO 470UF 25WV	
C103		C24-1410-89	ELECTRO 1000UF 25WV	
C104		C24-1710-51	ELECTRO 1UF 50WV	
C105	-107	C91-0083-05	CERAMIC 0.01UF M	
C108		C71-1727-05	CERAMIC 27PF J	
C110		C24-1210-61	ELECTRO 10UF 16WV	
C111		C55-1747-38	CERAMIC 0.047UF Z	
C130		C24-1047-61	ELECTRO 47UF 10WV	
C132		C24-1047-61	ELECTRO 47UF 10WV	
C134		C24-1010-71	ELECTRO 100UF 10WV	
C135		C24-6547-51	ELECTRO 4.7UF 35WV	
C136	-146	C55-1710-38	CERAMIC 0.01UF Z	
C147		C24-6547-51	ELECTRO 4.7UF 35WV	

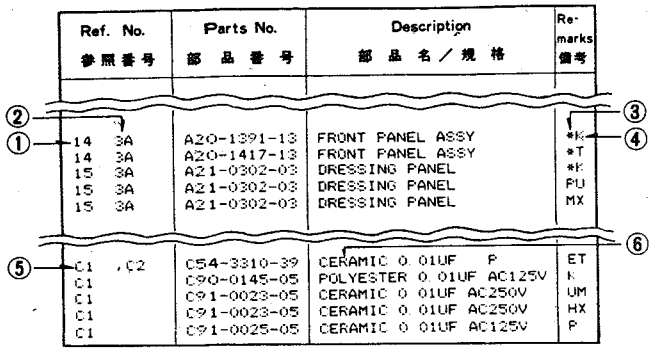
PARTS LIST

Ref. No. 参照番号	Parts No. 部品番号	Description 部品名／規格	Remarks 備考
C148	C24-1047-61	ELECTRO 47UF 10WV	
C149	C55-1710-38	CERAMIC 0.01UF Z	
C150	C24-1710-51	ELECTRO 1UF 50WV	
102 1B	E06-0801-05	CYLINDRICAL RECEPTACLE	
103 3B	E29-0094-05	TERMINAL BOARD	
-	L77-0571-05	CRYSTAL RESONATOR	*
※3 CF1 ,2	L72-0083-05	CERAMIC FILTER	*K
※3 CF1 ,2	L72-0083-05	CERAMIC FILTER	M
※3 CF1 ,2	L72-0083-05	CERAMIC FILTER	PU
※3 CF1	L72-0087-05	CERAMIC FILTER	ET
※3 CF2	L72-0085-05	CERAMIC FILTER	ET
※3 CF3	L72-0082-05	CERAMIC FILTER	*
L1	L31-0454-05	RF COIL	*
L2	L31-0445-05	RF COIL	*
L3	L32-0236-05	OSCILLATING COIL	*
L4	L30-0257-05	IFT	
L5	L30-0283-05	IFT	
L6	L30-0337-05	IFT	*
L7	L32-0231-05	OSCILLATING COIL	*
L8	L30-0316-05	IFT	
L9	L30-0317-05	IFT	
L10	L40-2292-44	INDUCTOR	
L11 -13	L40-1021-11	INDUCTOR	
L14	L40-1011-03	INDUCTOR	
L15	L40-1021-11	INDUCTOR	
L16	L79-0122-05	FILTER	ET
T1 104	L01-1921-05	POWER TRANSFORMER	*K
T1 104	L01-1921-05	POWER TRANSFORMER	P
R33	R42-6268-05	FL-PROOF RD68 J 2E	KP
R33	R42-6268-05	FL-PROOF RD68 J 2E	ET
R45	R43-1233-05	FL-PROOF RD33 J 2E	KP
R45	R43-1233-05	FL-PROOF RD33 J 2E	ET
R59	R42-6256-05	FL-PROOF RD56 J 2E	KP
R59	R42-6256-05	FL-PROOF RD56 J 2E	ET
R115	R92-0173-05	RC 2.2M M 2H	KP
R116	R40-8318-58	RC 1.8M K 2H	KP
R117	R43-6256-15	FL-PROOF RD560 J 2E	ET
R163	R90-0122-05	MULTIPLE COMPONENTS	*
R164	R90-0123-05	MULTIPLE COMPONENTS	*
R165,166	R90-0120-05	MULTIPLE COMPONENTS	*
R167	R90-0121-05	MULTIPLE COMPONENTS	*
R168	R90-0124-05	MULTIPLE COMPONENTS	*
R169	R90-0126-05	MULTIPLE COMPONENTS	*
R170	R90-0513-05	MULTIPLE COMPONENTS	*
VR1	R12-1040-05	TRIMMING POT 4.7K	
VR2	R12-3051-05	TRIMMING POT 22K	
S1 -10	S40-1012-05	PUSH SWITCH FIG105	
※1 D1 -3	V11-6100-20	SVC201Y-AY	*
※2 D4 ,5	V11-7700-60	KV1216(F,G,H)	*
D6 ,7	V11-0051-05	1N60	
D8 ,9	V11-0076-05	1S1555,1S2076	
D10	V11-0051-05	1N60	
D11 -14	V11-0076-05	1S1555,1S2076	
D15	V11-4103-70	XZ-142	
D16	V11-7101-10	EQA01-08(R1)	
D17	V11-1273-05	1S2076A	
D18 -21	V11-0295-05	W06B	*
D22	V11-4102-50	WZ-040	
D45	V11-0076-05	1S1555,1S2076	
D46	V11-0051-05	1N60	

Ref. No. 参照番号	Parts No. 部品番号	Description 部品名／規格	Remarks 備考
D47 -58	V11-0076-05	1S1555,1S2076	
IC1	V30-0270-20	AN217P(BB)	
IC2	V30-0246-10	AN377	
IC3	V30-0270-40	AN363N	
IC4	V30-0408-10	MN6142	*
IC5	V30-0409-10	AN6821	*
IC6	V30-0357-10	AN6135	*
IC7	V30-0406-10	MN1400ZS	*
IC8	V30-0407-10	MN1203	*
IC9	V30-0297-20	TC4069UBP, UPD4069C	
IC10	V30-1049-06	TC4019BP	*
IC11	V30-0411-10	TC4025BP UPD4025C	*
Q1	V09-0124-10	2SK61	
Q2	V03-0098-05	2SC535(B)	
Q3	V03-1675-30	2SC1675(K) ,2SC1342(B)	
Q4 -13	V03-0828-60	2SC828A(Q,R,S)	
Q4 -13	V03-2320-10	2SC2320(E,F),2SC945(QP)	
Q14 ,15	V01-0564-50	2SA564(Q,R,S)	
Q14 ,15	V01-0999-10	2SA999(E,F),2SA733A(QP)	
Q16	V01-0999-10	2SA999(E,F)	
Q17	V03-2320-10	2SC2320(E,F)	
Q18	V03-0828-60	2SC828A(Q,R,S)	
Q18	V03-2320-10	2SC2320(E,F),2SC945(QP)	
Q19 ,20	V03-2320-10	2SC2320(E,F)	
Q21 ,22	V03-0344-05	2SC1419(B)	
Q30 -33	V04-0636-10	2SD636(Q,R,S)	*
Q34	V02-0641-10	2SB641(Q,R,S)	*
Q35 -42	V04-0636-10	2SD636(Q,R,S)	*
Q43	V02-0641-10	2SB641(Q,R,S)	*
Q44	V09-0122-40	2SK68(K,L)	
Q45	V04-0636-10	2SD636(Q,R,S)	*
Q46	V03-0828-60	2SC828A(Q,R,S)	T
Q46	V03-2320-10	2SC2320(E,F),2SC945(QP)	T
Q47	V03-0828-60	2SC828A(Q,R,S)	
Q47	V03-2320-10	2SC2320(E,F),2SC945(QP)	
Q48 -52	V02-0641-10	2SB641(Q,R,S)	*
Q53	V01-0564-50	2SA564(Q,R,S)	
Q53	V01-0999-10	2SA999(E,F),2SA733A(QP)	
Q54	V02-0641-10	2SB641(Q,R,S)	*
Q55 ,56	V04-0636-10	2SD636(Q,R,S)	*
Q57	V02-0641-10	2SB641(Q,R,S)	*U
Q57	V02-0641-10	2SB641(Q,R,S)	ET
Q57	V02-0641-10	2SB641(Q,R,S)	M
106 2B	W09-0015-05	BATERRY	*

PARTS LIST

INSTRUCTION FOR PARTS LIST



Ref. No. 参照番号	Parts No. 部品番号	Description 部品名／規格	Remarks 備考
14 3A	A20-1391-13	FRONT PANEL ASSY	*K
14 3A	A20-1417-13	FRONT PANEL ASSY	*T
15 3A	A21-0302-03	DRESSING PANEL	*K
15 3A	A21-0302-03	DRESSING PANEL	PU
15 3A	A21-0302-03	DRESSING PANEL	MX
C1 ,C2	C54-3310-39	CERAMIC 0.01UF P	ET
C1	C90-0145-05	POLYESTER 0.01UF AC125V	K
C1	C91-0023-05	CERAMIC 0.01UF AC250V	UM
C1	C91-0023-05	CERAMIC 0.01UF AC250V	HX
C1	C91-0025-05	CERAMIC 0.01UF AC125V	P

① Exploded view drawing No.
② Position in exploded view.
③ Symbol of new parts
④ Area to which parts are shipped. Example: A20-1390-13 is the part No. of FRONT PANEL ASS'Y for the "K" type products (for U.S.A.). When this column is blank, it means that the same type of parts (same parts No.) are used for the products shipped to all areas.
⑤ Reference No. in schematic diagram.
⑥ Abbreviation of "ceramic capacitor".

All capacitors and resistors are listed using abbreviations.
Abbreviations

* Abbreviations of capacitors (Parts No. with initial letter "C").

ELECTRO ..... Electrolytic capacitor
LL-ELEC ..... Low leak electrolytic capacitor
NP-ELEC ..... Non-pole electrolytic capacitor
MICA ..... Mica capacitor
POLYSTY ..... Polystyrene capacitor
MYLAR ..... Mylar capacitor
CERAMIC ..... Ceramic capacitor
TANTAL ..... Tantalum capacitor
MF ..... Metallized film capacitor
MP ..... Metallized paper capacitor
OIL ..... Oil capacitor

The unit "UF" is used in lieu of "μF".

* Abbreviations of resistors (Parts No. with initial letters "R").

RC ..... Carbon composition resistor
RD ..... Carbon film resistor
FL-PROOF RD ..... Flame-proof carbon film resistor
RW ..... Wire wound power resistor
FL-PROOF RS ..... Flame-proof metal oxide film resistor
RN ..... Metal film resistor
FUSE-RESIST ..... Resistor with fuse function
2B ..... Rated wattage 1/8W
2E ..... Rated wattage 1/4W
2H ..... Rated wattage 1/2W
3A ..... Rated wattage 1W
3D ..... Rated wattage 2W
3F ..... Rated wattage 3W
3G ..... Rated wattage 4W
3H ..... Rated wattage 5W

All resistor values are indicated with the unit (Ω) omitted.

* Abbreviations common to capacitors and resistors.

C ..... ±0.25pF (Used for capacitors only)
D ..... ±0.5pF (Used for capacitors only)
F ..... ±1%
G ..... ±2%
J ..... ±5%
K ..... ±10%
M ..... ±20%
Z ..... +80%, −20%(Used for capacitors only)
P ..... +100%, −0%(Used for capacitors only)

Resistors RD (carbon composition resistors) are not listed in the parts list. For values, refer to the schematic diagram.
Code in X05-1740-11

K, P: X05-1740-11 E: X05-1742-71
U, M: X05-1740-81 T, X: X05-1740-51